American Society for Testing Materials BULLETIN

ISSUED BI MONTHLY

Yuletide Greetings

December
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ENGINEERS' CLUB BUILDING
1315 SPRUCE ST., PHILADELPHIA

A TECHNICAL SERVICE

for the

Chemical and Related Industries

ANALYSIS RESEARCH

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Inquiries directed to the Office of the Executive Secretary, R. T. Baldwin, No. 50 East 41st Street, N. Y. City, are assured of reaching the members best qualified to handle them.

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STILLWELL, ALBERT G., Stillwell Laboratories, 41 Water St., New York City.

THOMAS, ARTHUR W., Broadway & 118th St., New York City.

TOUR, SAM, Lucius Pitkin, Inc., 47 Fulton St., New York City.

TREVITHICK, HARRY P., 2 Broadway, New York City.

WALDEN, GEORGE H., JR., Broadway & 118th St., New York City.

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American Society for Testing Materials

BULLETIN

ENGINEERS' CLUB BUILDING 1315 SPRUCE STREET PHILADELPHIA, PA.

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Cleveland Regional Meeting Will Be Held March 9

Symposium on Rubber Products to be Technical Feature—Spring Group Committee Meetings Week of March 7

THE third Regional Meeting of the Society will be held in Cleveland on Wednesday, March 9, 1932. This meeting is under the auspices of the members who are located in Cleveland and environs and the arrangements are being made by the Cleveland District Committee of which H. A. Schwartz is chairman.

It will be recalled that the Cleveland District Committee was organized last May for the purpose of bringing Society activities closer to the members in the Ohio district and to stimulate interest in the work of the Society in that region. This committee suggested that a regional meeting be held in 1932 at Cleveland and the Executive Committee approved this recommendation.

The policy of having the Spring Group Committee Meetings during the week in which the Regional Meeting is held will be continued. The standing committees have indicated that Cleveland will be a satisfactory place for the meetings and they have approved the week of March 7 as appropriate. All committee meetings and the Regional Meeting will be held at the Hotel Cleveland.

Symposium on Rubber Products

The technical feature of the meeting will be a Symposium on Rubber Products. Cleveland is located near one of the world's greatest manufacturing districts for rubber products. These are being used more and more widely. These conditions together with the fact that in no one convenient place can a user of rubber products find the necessary data about these products to intelligently purchase and use them, make this subject a particularly appropriate one for the meeting.

An important objective of the program is the dissemination of increased knowledge concerning rubber and rubber products among those outside the rubber industry so as to aid engineers in applying rubber products to their particular needs and to assist in the preparation of proper specifications. To accomplish this objective the papers are to be developed chiefly from the viewpoint of a consumer of rubber products and the average technical man rather than being directed primarily to the rubber technologists; they will be written broadly rather than with a purpose of developing specific technical details. In order to adequately treat of this subject, it has been definitely decided to have two sessions in which the papers will be given. The program is being arranged so that there will be time for ample discussion.

Committee D-11 on Rubber Products has cooperated with the District Committee to arrange the technical program.

Technical Sessions

The papers to be given in the morning session are being prepared with a purpose in view of building up a knowledge of rubber technology and manufacture which will serve as a background and a foundation for the consideration of the afternoon session. The morning session will give a picture of the general processes involved, the chief materials used in modifying the properties of rubber and the reasons for their use.

In the afternoon session consideration will be given to the various classes of service for which rubber products are used and the properties which make different kinds of rubber suitable for these uses. The extent to which properties of rubber can be modified both by fabrication methods and by the use of other materials in the rubber will be discussed. The papers in this session will in general, involve the properties of rubber as an engineering material.

Invitation Extended to All Members of the Society

While these regional meetings have as one of their purposes the fostering of closer relations among the Society members in the districts where the meetings are held, they are so valuable that many members of the Society residing at some distance from the meeting place attend. All members of the Society are cordially invited to attend the sessions. Further details of the meeting will be given in the January issue of the 1932 BULLETIN.

Group Committee Meetings

As mentioned previously, the standing committees of the Society will hold the annual spring group meetings of committees in conjunction with the Regional Meeting. The Hotel Cleveland has excellent meeting facilities and all committee meetings will be held there, extending over the dates Monday, March 7, through Friday, March 11. It is expected that in view of the increased use of rubber products and the importance that rubber is assuming as an engineering material that a large number of the committee members who are attending

the Group Committee Meetings will also participate in the Regional Meeting. The Cleveland District Committee has definite plans for making the stay of committee members a pleasant one. One of the features will be visits to many of the industrial plants in Cleveland and one or more trips will be arranged for the inspection of some of the rubber plants at Akron. This will enable the members and visitors who attend the regional meeting to actually see the production of rubber products.

Arrangements will be made with the various railroad passenger associations for the granting of the certificate plan of transportation whereby members make a considerable saving in their round trip fare. Further announcements regarding room rates and reservations at the hotel and schedules of committee meetings will be made.

New York Metropolitan District Meeting

Large Attendance at Technical Session

The second in a series of meetings planned by the New York District Committee was held on November 5 at the Hotel Paramount and, as was the case with the first meeting last spring, a splendid attendance of A.S.T.M. members and guests rewarded the committee for its efforts. In addition to Metropolitan District members of the Society, the New York Divisions of other societies were invited, including the New York Paint, Oil and Varnish Club, the New York Paint and Varnish Production Club and the New York chapter of the National Association of Purchasing Agents.

The New York District Committee met in the afternoon and discussed the plans for another local meeting, which is to be held in February. (Details of this meeting will be given in the January, 1932 BULLETIN.) The dinner, which was served in the Paramount Grill, offered an opportunity for the New York members to meet with one another and informally discuss topics of mutual interest. The number of members and guests at the dinner was 219.

Technical Session

The technical session planned for this meeting was based on a discussion of "Non-Metallic Protective Coatings," and an attendance of 350 is ample evidence of the interest in this subject. Dr. Allen Rogers, Chairman of Committee D-1 on Preservative Coatings, which sponsored the technical program, presided. Dr. Maximilian Toch, President, Toch Brothers, Inc., spoke on "The History of Protective Coatings," and in the course of his address gave many interesting points relating to the development of coatings. Mr. H. A. Gardner, Director, Scientific Section, American Paint and Varnish Manufacturers Association, spoke on "The Economics of Paint." Mr. Gardner had his address printed in advance of the meeting and copies were distributed to those who were present. The estimated economic saving through the use of paint in the conservation of lumber, metals, concrete and brick, and in the conservation of fuel and power were outlined. Dr. James K. Hunt, Research Chemist, du Pont Experimental Station, discussed the "Failure of Non-Metallic Coatings." He outlined the type of failure which develops on aging and described the influence of climatic conditions on types of failure. Doctor Hunt, with the aid of lantern slides, described the failures of varnishes and enamels, lacquers and paints.

Symposium on Steel Castings in 1932

One of the most interesting sessions of the 1932 annual meeting will be that in which the Symposium on Steel Castings is to be held. This Symposium is the second one jointly sponsored by the American Foundrymen's Association and the A.S.T.M., the first one, devoted to malleable iron castings, having been held at the Chicago, 1931 annual meeting. These symposiums are part of a plan by which the two societies are to sponsor the procuring and publication of critical data on the engineering properties of castings—data of inestimable value to engineers who design and place in service various types of castings.

The purpose of the Symposium on Steel Castings is to correlate and record data regarding the properties of steel castings produced by the most widely used methods of molding, casting, use of alloys and heat treatment. Welding, which is rapidly assuming more and more importance in fabricating and repair problems, will be discussed from the standpoint of a steel foundryman. Some pertinent statistics on the economics of the steel casting industry will be brought out in one of the papers.

The subjects to be covered by the various authors are listed here and will give an idea of how extensively these cover the technical phases of steel castings. The final title of any paper may differ slightly from that given here.

Introduction—W. C. Hamilton, American Steel Foundries
General Survey of Steel Casting Industry—J. H. Locke, General Steel Castings Corp.
Statistics Covering Steel Castings—Steel Founders' Society of America
General Principles of Design as Related to Physical Properties, Soundness and Ease of Production—F. A. Lorenz, Jr., American Steel Foundries
Problems in the Heat-Treatment of Steel Castings—A. W. Lorenz, Bucyrus Erie Co.
Test Bar Specifications, Including the Relationship Between Physical Properties Obtained from Coupons and the Physical Properties of the Metal in the Castings—R. A. Bull, Electric Steel Founders' Research Group
General Data on Steel Castings and Their Fields of Application Governed by the Various Physical Properties—C. E. Williams and C. H. Lorig, Battelle Memorial Inst.
Development of Alloy Steels for Castings
(*a*) Pearlitic Steel Castings—Fred Grotts, Continental Roll and Steel Foundry Co.
(*b*) Iron-Chromium, Iron-Chromium-Nickel and Related Alloys—Data to be obtained from Committee A-10, A.S.T.M., Jerome Strauss, Vanadium Corp. of America
(*c*) Austenitic Manganese Steel Castings—J. H. Hall, Taylor-Wharton Iron and Steel Co.
Welding—T. S. Quinn, Lebanon Steel Foundry.

Advisory Committee

The work of arranging for the papers and preparing the Symposium has been carried out by an Advisory Committee with the following personnel:

W. C. Hamilton, *Chairman*, Research Director, American Steel Foundries
W. M. Barr, Consulting Chemist, Union Pacific Railroad Co.
George Batty, Technical Director, Steel Castings Development Bureau
R. A. Bull, Director, Steel Founders' Research Group
J. A. Capp, Chief of Testing Laboratory, General Electric Co.
R. E. Kennedy, Technical Secretary, American Foundrymen's Assn.
Fred Grotts, Metallurgical Engineer, Continental Roll and Steel Foundry Co.
J. H. Locke, Assistant General Manager, General Steel Castings Corp.
Jerome Strauss, Chief Research Engineer, Vanadium Corp. of America
C. L. Warwick, Secretary-Treasurer, American Society for Testing Materials
G. B. Waterhouse, Professor of Metallurgy, Massachusetts Institute of Technology.

The Use of A.S.T.M. Standards

II. Use of Standards by Producers

THE October issue of the A.S.T.M. BULLETIN raised the question whether our members were making the maximum possible use of A.S.T.M. specifications and methods of testing. The present article relates specifically to the use of standards by the producer of materials and the manufacturer of finished or semi-finished products and is addressed to this group.

A.S.T.M. specifications and methods both represent agreement between producer and user, and as such should prove a big aid in the producer's relationship with the user of his product. It would accordingly seem important that materials be marketed to A.S.T.M. specifications when available. Also that A.S.T.M. methods be used in routine tests for control of quality and determining the properties of the finished product. Where possible why not refer to conformity to A.S.T.M. standards in your advertising and in all contacts with your consumers? If called upon to furnish substantially the same goods to a variety of customers specifications, it will obviously be to your advantage to have the customer adopt A.S.T.M. specifications wherever applicable.

The Society furnishes, at small cost, reprints in quantity of its specifications or methods, with special imprints or covers if desired. Many manufacturers have effectively used such reprints to introduce A.S.T.M. standards to their customers in the sale of their products. The advantages are obvious and at the same time you are educating the consumer—often the small one who may not be so well informed—in the purposes and activities of the Society.

Aside from this use of A.S.T.M. standards, every producer *buys* some materials or products whether they be raw or semi-finished materials entering into his own manufacturing process or whether they be materials used in construction of plant or operating equipment. Usually such materials must meet definite requirements and are purchased to some specifications. *Why not A.S.T.M. standards where available?*

Some of the largest producers of materials in this country are at the same time among the largest *consumers* of many other materials; if they would use A.S.T.M. standards as *purchasers*, they would experience the benefits the consumer enjoys in the use of standards and the advantages of a general program of standardization in industry would be more quickly realized.

We recommend these two thoughts to every producer member in the Society and will cooperate to make A.S.T.M. standards—and hence his membership—of maximum possible value to him. And it should be remembered that if in any instance an A.S.T.M. specification or method does not completely serve the purpose, criticisms of standards are invited.

Offers of Annual Meeting Papers

Attention is called to the solicitation of papers for the 1932 annual meeting issued in the Circular to Members No. 216 and forwarded under date of December 1. This call for papers is sent out early in order that the program may be completely developed as soon as possible. The limiting date fixed for receipt of offers is February 23, 1932, and all members who have in mind offering papers for the 1932 Annual Meeting are urged to have such offers in the hands of the Secretary-Treasurer together with synopses of the proposed papers well in advance of that date.

Selected A.S.T.M. Standards for Technical Students

First Book Revised; Second Recently Issued

It will be recalled that a publication "Selected A.S.T.M. Standards for Students in Engineering" was issued in December, 1929. This was prepared to meet requests from members of technical school faculties that the Society publish in convenient form a group of selected specifications and test methods for student use in courses in materials testing and specification writing. It was intended as a supplement to texts used in such courses and lectures, rather than to supplant these. It made available for the students, standards which are actually used in industry, and at the same time gave them knowledge of the purpose, form and wording of standard specifications.

Since it was issued there have been more than 3000 copies distributed to 56 engineering and technical schools. The demand necessitated a new printing of the book and accordingly a new edition was printed in October of this year. It has been revised somewhat and includes some additional standards, which in the opinion of faculty members who are using it, will make it of still more value.

Standards for Students in Chemistry, Chemical Engineering and Metallurgy

The book "Selected A.S.T.M. Standards for Students in Engineering" was primarily intended for use in courses involving materials testing and specification writing. The fact that it has been so favorably received led the Committee on Papers and Publications to consider the preparation of a book of selected standards for chemistry and metallurgy students—since the first book does not primarily reach these groups. After careful study, a second publication intended for students in chemistry, chemical engineering and metallurgy has been issued. Its contents have been chosen to make it a valuable supplementary book in laboratory courses involving chemistry, metallography and related subjects.

The selection of the material included in the book was made by the following special committee acting as an advisory committee to the Committee on Papers and Publications:

C. S. Reeve, *Chairman*, Chief Chemist, The Barrett Co.
T. G. Delbridge, Process Supervisor, The Atlantic Refining Co.
R. L. Hallett, Chemist, National Lead Co.
Arthur W. Carpenter, Manager of Testing Labs., The B. F. Goodrich Co.

This book has been specially priced to students. Copies are being sent to many faculty members who should be interested in using it in the courses under their direction. The Secretary-Treasurer would appreciate hearing from any members of the A.S.T.M. who might have suggestions to further the use of this book. Students who purchase these books and subsequently join the Society as Student Members are credited with the cost of the books toward their dues.

Chicago Committee Plans Local Meeting

The Chicago District Committee is formulating plans for a local meeting to be held in conjunction with the Western Society of Engineers. At its last meeting, November 12, the District Committee approved the appointment of a group to confer with the Western Society of Engineers relative to arrangements for the meeting.

Details of this contemplated local meeting will be given in subsequent issues of the BULLETIN.

AMERICAN SOCIETY FOR TESTING MATERIALS

BULLETIN

Issued Bi-Monthly

Engineers' Club Building, 1315 Spruce St., Philadelphia, Pa.

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Number 53 December 18, 1931

Our Local Meetings

DURING the past few years there have been a number of developments in the Society's activities looking to the integration and consolidation of the Society membership and the extension of the influence of the Society. This was referred to in the October issue of the BULLETIN in respect to the introduction of regional meetings. Some years ago the only meeting of the members was the annual one and, aside from individual committee meetings, was the sole opportunity afforded members for personal contact and technical discussion. With the institution of the group meetings of A.S.T.M. committees, particularly when held in conjunction with a regional meeting, there was established what in effect amounted to a second meeting of the Society with its many opportunities for association.

More recently at the instance of our district committees a new means has been established of extending the personal contact and association phases of Society membership. The New York District Committee has already held two distinctly worthwhile local meetings and plans other meetings for the near future. To all of these meetings members of the local sections of other societies are invited. Similarly the Detroit District Committee arranged for a meeting in cooperation with the local chapter of the American Society for Steel Treating. The Chicago Committee also plans to hold a local meeting.

By holding a local meeting the district committees accomplish several useful purposes:

1. They give the Society members in their localities an opportunity of meeting with each other and establishing helpful social and technical contacts.

2. The programs arranged usually provide for the presentation of technical papers or addresses which contribute measurably to the knowledge of materials.

3. Opportunity is afforded for members to bring as guests those among their personal or business acquaintances who have an interest in materials and the work which the Society is doing. The effect of this is to make A.S.T.M. work more widely and favorably known and provide worthwhile possibilities for growth of membership.

In all of this the Society is kept more prominently before its own members, particularly among those who find it difficult if not impossible to get to annual meetings. Local meetings thus provide an opportunity to take part personally in an important phase of the Society's work. This should contribute in making the Society an actual living organization instead of merely a name. The district committee has a distinct place and it is cordially welcomed as a contributor to the Society's development.

Every Member Can Help With This Curve

While it is a regretful bit of knowledge to realize that the past year has been the second in the Society's history in which the membership curve has not gone up, yet it is a keen source of gratification to know that the Society is one in which the losses of membership have been relatively low when compared with many other national associations and groups. When economic conditions are such as they are, technical societies are often desperately pressed to continue even normal activities. 1931 has been one of the Society's most active years. This has helped greatly in membership work; the effect on future membership results when normal times do come should be far reaching.

But we cannot wait for conditions to help us. Each of us can do something *now* to start the membership curve up again. Surely all of us have contacts with companies who could and should be members of the A.S.T.M. No producing or consuming organization is too small to fail to profit from A.S.T.M. affiliation. Most of the A.S.T.M. loss the past year is due to company resignations—yet there are many new companies joining the Society, companies which have recently become acquainted with A.S.T.M. work—its significance and value in the materials field. It is surprising how many companies there are which are ignorant of Society activities, in fact which do not know that the Society exists.

A.S.T.M. activities are proportional to its membership—the Society cannot stand still—it must not slip backward. The General Membership Committee is active and has done a good deal. It asks for the help of each member in this work—let each member do his best to get the wheel rolling up hill again. January is a splendid time to join the Society; new publications, new work in progress. Let each member extend one invitation to an associate or company with which he has a contact—the cumulative effect will be worth the effort.

Chairman, Committee on Membership.

Use of Society's Proceedings Widespread

As an evidence of the value of the Society's *Proceedings* and interest in its activities in foreign countries, it may be mentioned that early in the year an order was received from a university in China for a complete set of the Society's *Proceedings* as well as other publications. The laboratory of testing materials of a large railroad in the Argentine has also taken out membership and purchased a complete set of the *Proceedings*.

1932 Annual Meeting in Atlantic City

Attention is again called to the dates set for the 1932 annual meeting which, as announced in the October BULLETIN, are June 20–24. The meeting will be held at Atlantic City where we have held such successful meetings in the past. The facilities of the new Haddon Hall are such that practically the entire meeting can be held in the one hotel.

Plans for the program are well advanced looking toward the holding of a Symposium on Steel Castings as a joint meeting of the Society with the American Foundrymen's Association. There is in prospect a Symposium on the Significance of Various Tests in Judging the Quality of Concrete, and a technical session on textile materials.

Additional Sustaining Memberships

In the October BULLETIN attention was called to the first sustaining member of the Society, namely The Texas Co. This class of membership has now been adopted by two additional companies. The Universal Atlas Cement Co., with headquarters in Chicago, is the second sustaining member, and the distinction of being the third sustaining member goes to the Bell Telephone Laboratories, New York City. These memberships will take effect on January 1, 1932. Both companies are represented on several standing committees of the Society and these representatives take a very active part in A.S.T.M. work. The class of sustaining membership was created to enable members to increase their support of Society work to a degree more nearly commensurate with the value of that work to them.

Society Appointments and Representatives

R. A. Bull, Director, Electric Steel Founders' Research Group, P. E. McKinney, Metallurgical Engineer, Bethlehem Steel Co., and C. L. Kinney, Jr., Director, Physical Laboratory, Illinois Steel Co., have been appointed members of the Joint Research Committee on Effect of Temperature on the Properties of Metals.

J. D. Stoddard, Vice-President and Treasurer, The Detroit Testing Laboratory, is now the Society's representative on the Sectional Committee on Cast Iron Pipe.

T. A. Boyd, Head, Fuel Section, Research Laboratories, General Motors Corp.; and R. L. Templin, Chief Engineer of Tests, Aluminum Company of America, have been appointed members-at-large of Committee E-1.

R. P. Anderson, Secretary, Division of Refining, American Petroleum Inst., is the American representative on the International Standards Association Committee on Nomenclature and Methods of Testing Petroleum Products.

P. J. Freeman, Chief Engineer, Bureau of Tests and Specifications, Department of Public Works, Pittsburgh, is now chairman of the Pittsburgh District Committee.

A. A. Stevenson, Past-President, has been reappointed as one of the Society's representatives on the Standards Council of the A.S.A. The Secretary-Treasurer and Assistant Secretary continue as alternates.

M. W. Boyer, Director, Development and Research Dept., Standard Oil Co. of Louisiana, represented the Society at the inauguration of the new president of Louisiana State University on November 12.

Committee on Calibration of Testing Machines

Announcement is made of the organization of a new Section on Calibration of Testing Machines and Apparatus, of Committee E-1 on Methods of Testing, as a subdivision of the work of the Technical Committee on Mechanical Testing which is under the chairmanship of Prof. H. F. Moore. Professor Moore will serve as chairman of the new section also.

The present personnel of the section is as follows:

H. F. Moore, *Chairman*, (University of Illinois)
C. H. Greenall (Bell Telephone Laboratories)
R. B. Lewis (Olsen Testing Machine Co.)
W. C. Moran (Riehle Bros. Testing Machine Co.)
M. F. Sayre (Union College)
G. S. von Heydekampf (Baldwin-Southwark Corp.)
H. L. Whittemore (Bureau of Standards)

An invitation to serve on the Section on Calibration of Testing Machines is extended to those interested in participating in this work. Further information can be obtained from the Secretary-Treasurer.

Committee on Award of Dudley Medal

In accordance with requirements of the Rules Governing the Award of the Dudley Medal, the Executive Committee has appointed the following Committee on Award:

E. L. Lasier, *Chairman*, Consulting Materials and Industrial Engineer, Palisade, N. J.
J. C. Pearson, Director of Research, Lehigh Portland Cement Co., Allentown, Pa.
J. B. Johnson, Chief, Material Section, Materiel Division, Wright Field, Dayton, Ohio.

This committee will review the eligible technical papers presented at the annual meeting of the Society in Chicago last June and will select that paper of outstanding merit constituting an original contribution on research in materials which in its opinion deserves the award of the medal. The author or authors of the paper so selected will be awarded the medal at the annual meeting next year.

Specific Use of A.S.T.M. Standards

In the specifications for general work for the Lakefront Stadium, which was built by the City of Cleveland, there were eleven references to the Society's specifications and methods of test. They are as follows:

Portland Cement—Specifications C 9 – 30
Hydrated Lime—Specifications C 6 – 24
Gypsum Plasters—Specifications C 28 – 30
Sand Tests—Methods C 40 – 27
Reinforcing Bars—Specifications A 15 – 30
Building Brick—Specifications C 62 – 30
Structural Steel—Specifications A 9 – 29
Gray-Iron Castings—Specifications A 48 – 29
Malleable Castings—Specifications A 47 – 30
Cylinder Tests—Methods C 31 – 27
Slump Test—Method D 138 – 26 T

We are indebted to Mr. K. H. Osborn, Secretary, The Osborn Engineering Co. for this information.

The New York Edison System Companies have adopted 68 of the Society's specifications and methods of test for general use in their standard specifications. These are not listed separately here; they include for the most part the Society's specifications referring to the ferrous and non-ferrous metals, insulating materials and several methods of test.

The Secretary-Treasurer will be pleased to learn of other instances where A.S.T.M. standards have been adopted.

Committee C-12 on Mortars for Unit Masonry Organized

ANNOUNCEMENT was made in the July issue of the A.S.T.M. Bulletin of the organization of a new standing committee of the Society to be designated Committee C-12 on Mortars for Unit Masonry with the following scope:

"Research to promote knowledge of properties and tests of mortars for unit masonry and development of methods of test and specifications for such mortars. It is intended that the activities of the committee shall be closely correlated with other interested committees of the Society."

At a meeting held in June, organization was effected with temporary officers and a temporary advisory committee which have continued to function during the past few months in the completion of the personnel of the committee and in the development of a subcommittee organization.

The personnel of the committee is given below:

Temporary Officers		Temporary Advisory Committee
Chairman:	R. E. Davis	Stanton Walker
Vice-Chairman:	J. C. Pearson	J. W. McBurney
Vice-Chairman:	T. R. Lawson	D. E. Parsons
Secretary:	C. L. Warwick	M. O. Withey

Producers of Materials for Mortars

Cementing Materials:

Allentown Portland Cement Co., W. H. Andrews, Supervising Chemist, Conshocken, Pa.
L. E. Johnson, Secretary and General Manager, Finishing Lime Assn. of Ohio, Toledo, Ohio.
Louisville Cement Co., H. D. Baylor, Vice-President, Speed, Ind.
Medusa Portland Cement Co., W. L. White, Jr., Assistant General Manager, Cleveland, Ohio. (Alan Jackson, alternate.)
National Lime Assn., N. G. Hough, President, Washington, D. C. (L. S. Trainor, alternate.)
J. C. Pearson, Director of Research, Lehigh Portland Cement Co., Allentown, Pa.
Portland Cement Assn., H. F. Gonnerman, Manager, Research Laboratory, Chicago, Ill. (C. G. Walker, alternate.)
Riverton Lime Co., W. E. Carson, President, Riverton, Va.
Warner Co., J. A. Murray, Chief Chemist, Devault, Pa.

Aggregates:

National Crushed Stone Assn., A. T. Goldbeck, Director, Bureau of Engineering, Washington, D. C.
National Sand and Gravel Assn., Stanton Walker, Director, Engineering and Research Division, Washington, D. C.; also C. E. Proudley, Assistant Director.
National Slag Assn., R. E. Roscoe, Chemical Engineer, Bessemer Cement Co., Youngstown, Ohio.

Producers of Masonry Units

American Face Brick Assn., G. S. Eaton, Secretary-Treasurer, Chicago, Ill.
H. S. Brightly, Secretary-Director, Building Stone Assn. of Indiana, Bloomington, Ind.
Cast Stone Inst., Chicago, Ill. (representative to be appointed).
Clay Products Inst. of California, N. W. Kelch, Secretary-Manager, Los Angeles, Calif.
Common Brick Mfrs. Assn. of America, J. W. McBurney, Research Associate, Bureau of Standards, Washington, D. C.
Gypsum Assn., H. J. Schweim, Secretary and Chief Engineer, Chicago, Ill.
National Terra Cotta Society, W. F. Lockhardt, Secretary-Director, New York City.
Structural Clay Tile Assn., E. C. Kerth, Engineer, Secretary, Chicago, Ill.
U. S. Gypsum Co., C. K. Roos, Research Manager, Chicago, Ill.

Consumers and General Interests

American Inst. of Architects, Prof. C. M. Gay, School of Fine Arts, University of Pennsylvania, Philadelphia, Pa. (F. Leo Smith, alternate.)
F. O. Anderegg, Consulting Specialist on Building Materials, Pittsburgh, Pa.
R. E. Davis, Professor of Civil Engineering, University of California, Berkeley, Calif.
J. W. Ginder, Superintendent, Architectural Engineering Division, U. S. Treasury Dept., Washington, D. C.
T. R. Lawson, Professor of Civil Engineering, Rensselaer Polytechnic Inst., Troy, N. Y.
L. A. Palmer, Masonry Mortar Research Fellowship, Bureau of Standards, Washington, D. C.
D. E. Parsons, Chief, Masonry Construction Section, Bureau of Standards, Washington, D. C.
M. O. Withey, Professor of Mechanics, University of Wisconsin, Madison, Wis.
J. R. Withrow, Professor of Chemical Engineering, Ohio State University, Columbus, Ohio.
W. D. Guion, Commissioner of Buildings, Cleveland, Ohio (informally representing Building Officials Conference).

A number of the standing committees of the Society are interested in the work of the new committee and are represented theron by members, who will serve in a liaison capacity.

Subcommittee Organization

One of the most important activities of the committee will be the correlation of research investigations that have been carried out on masonry mortars and a determination of the present gaps in existing knowledge. A subcommittee on correlation of research is accordingly contemplated in the committee's organization. Since many features of specification requirements and test procedures are involved a rather extensive subcommittee organization has been determined upon by the temporary advisory committee as indicated below:

1. Advisory.—To outline the activities of the committee and to conduct the business of the committee between meetings.

2. Publications.—To act as an editorial committee in the preparation of reports and to establish general publication policies.

3. Correlation and Research.—To bring together such information as is in existence regarding masonry mortars and to correlate these data; to lay out research programs and to correlate research activities.

4. Specifications.—To prepare specifications for masonry mortars of various classes.

5. Definitions.—Define terms employed in masonry construction and to standardize the use of such terms.

6. Testing Apparatus and Testing Methods.—To devise apparatus and testing methods for standard mortar tests as required by Subcommittee on Specifications.

7. Cementing and Plasticizing Materials.—To gather information concerning various cementing and plasticizing materials, their properties and uses.

8. Mortar Sands.—To gather information concerning the mortar sands in common use in various parts of the United States, the effect of character of sand upon the various properties of mortars including strength, plasticity and shrinkage.

9. Preparation of Mortars.—To make a study of the practice in the use of mortar materials and in the proportioning and mixing of mortars; to make a study of the possibility of improving practice in the use of mortar materials.

10. Unit Masonry Construction Practice.—To make a study of the practice regarding unit masonry construction of all classes; to correlate these practices and to carry out such investigations as are necessary for improved practice.

11. Plasticity Tests.—To organize and carry out such programs of investigation as are necessary to establish adequate methods of determining plasticity, consistency, rate of hardening; to study effect of various cementing and plasticizing materials upon plasticity, and to set up plasticity standards.

12. Strength Tests.—To review the results of such strength tests as have been made both upon mortars themselves and upon masonry specimens. To formulate an adequate program of tests to determine the factors which influence the strength of masonry in compression, flexure and shear.

13. Volume Change Tests.—To organize and carry out such tests as may be necessary to determine volume changes and the factors which influence them.

14. Durability Tests.—To make a study of test methods for determining the durability of masonry and to organize and carry out a program of tests which will establish the factors which influence durabiltiy.

15. Permeability Tests.—To organize a program of building and laboratory research which will seek to determine the factors which affect permeability and to establish methods of masonry manufacture which will insure impermeable walls.

16. Efflorescence and Staining.—To make such field and laboratory investigations as may be necessary to establish the causes of efflorescence and staining, and remedies therefor.

Effect of Temperature Symposium

Book Available in January

If the present rate of progress is maintained on the final preparation of the book of the Symposium on the Effect of Temperature on the Properties of Metals, it should be ready early in January. Only those actually engaged in the work can appreciate what a task it is to get 27 papers and more than 200 pages of discussion ready to be printed. In its final form the Symposium book will comprise about 825 pages.

Everything possible is being done to make the book a ready reference volume, both in respect to specific and general topics relating to temperature effect on metals. A specially prepared introduction has been written by H. W. Gillett, Director, Battelle Memorial Institute, and chairman of the Symposium Program Committee. This gives a brief history of the events leading up to the Symposium and summarizes the high points of the papers. There is also an extensive subject index and an author index for those who wish to refer to specific subjects.

The book itself covers the engineering trends and requirements for metals at high and low temperatures in many industries and the properties of available metals for high- and low-temperature service. The ferrous metals and alloys are extensively discussed as well as a host of non-ferrous alloys.

The Symposium will be issued as a special publication—not a part of the Proceedings—and at a special price to members. The pre-publication price is $4.50 to members of the A.S.T.M. and A.S.M.E. After February 1, the price will be $5.50 to members and $6.00 to non-members. A scale of prices for quantity orders has been decided upon to become effective after the pre-publication price expires. This is as follows:

	Price per Copy	
Copies of Book	*Members*	*Non-Members*
1– 9	$5.50	$6.00
10–24	5.25	5.75
25–49	5.00	5.50
50 and over	4.50	5.00

This book is being published jointly by the American Society of Mechanical Engineers and the A.S.T.M., the two societies having joined in sponsoring the sessions at the 1931 A.S.T.M. meeting in which the Symposium itself was held.

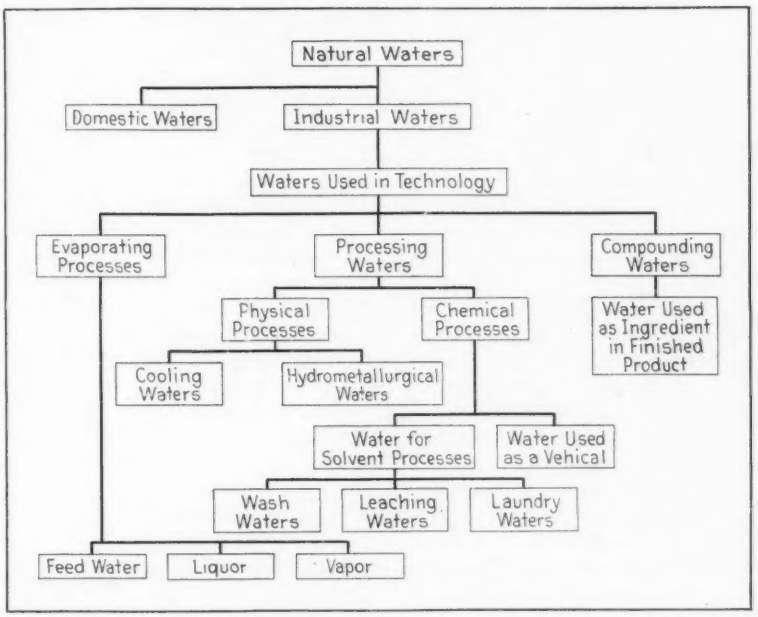
Representation on U. S. National Committee

Dr. G. W. Thompson, Past-President of the Society, and Chief Chemist of the National Lead Co., has resigned from his membership on the U. S. National Committee of the International Electrotechnical Commission. He has served as one of the Society's representatives since 1927. In the October BULLETIN announcement was made of the formation of the Electrical Standards Committee under the procedure of the American Standards Association and how this committee, with additional members, was to become the U. S. National Committee of the I.E.C. Past-President F. M. Farmer represents the A.S.T.M. on the Electrical Standards Committee and with E. A. Snyder of the Vacuum Oil Co., New York, will represent the Society on the U. S. National Committee. Mr. Snyder has represented the Society on this latter committee since 1925.

New Standing Committee on Water Analysis

Reference has been made in the reports of the Executive Committee of the Society and of Committee E-10 on Standards to the organization of a new standing committee of the Society whose function would be the development of standard methods of water analysis. It is now proposed to proceed with the organization of such a committee and Mr. Max Hecht, Chief Chemist, Duquesne Light Co., Pittsburgh, has been designated by the Executive Committee as temporary chairman. The Society has been interested for some years in the Joint Committee on Boiler Feed Water Studies, on which the Society has been represented by Mr. Hecht and Mr. F. N. Speller. The methods to which the new standing committee will give consideration would be of interest not only in connection with boiler feed water but also all types of industrial waters. A study of the schematic diagram on this page should give an idea of the work which is proposed for this committee.

It is proposed to organize with a relatively small group in the initial stages of getting the work of this committee under way. The committee will no doubt be augmented at a later date. Those interested in the work of this proposed committee should communicate with the Secretary-Treasurer.



SCHEMATIC DIAGRAM OF PROPOSED WORK FOR COMMITTEE ON WATER ANALYSIS.

1931 Book of Tentative Standards Distributed

Distribution of the 1931 Book of A.S.T.M. Tentative Standards was completed in November to those who ordered copies. Each of the 180 tentative standards of the Society is included in this volume, the only one containing all A.S.T.M. tentative standards. The 1931 book comprises 1008 pages. This, with the Book of Standards, includes all of the standards promulgated by the Society. Members who have neglected to order their copies of the Book of Tentative Standards may secure them promptly from Society Headquarters. The price to members is $4.50 in paper binding, $5.50 in cloth binding.

Schedule of Committee Meetings

DATE	COMMITTEE	PLACE
January 13	E-9 on Research	Detroit, Mich.
January 14–15	A-1 on Steel	Philadelphia
January 19	Executive Committee	Philadelphia
January 21–22	D-2 on Petroleum Products and Lubricants	Washington, D. C.
February	B-6 on Die-Cast Metals and Alloys	New York City
February	C-8 on Refractories	Washington, D. C.
February	E-6 on Papers and Publications	Philadelphia
February	E-10 on Standards	Philadelphia
March 3–4	D-9 on Electrical Insulating Materials	New York City
March 7–11	SPRING GROUP MEETINGS OF COMMITTEES	Cleveland, Ohio
March	D-1 on Preservative Coatings for Structural Materials	Philadelphia
March	D-13 on Textile Materials	Providence, R. I.

Developments in Refractory Testing Field Discussed

At the October meeting of Committee C-8 on Refractories in Cleveland several interesting developments in the refractory testing field were discussed.

The question of having the committee adopt a standard sieve scale and methods of making both wet and dry sieve analyses was presented. There is a necessity for these steps because increasing quantities of ground and crushed refractory materials are being bought on screen specifications. This matter was referred to the Subcommittee on Research for recommendations at the next committee meeting.

The Subcommittee on Precision and Tolerance presented a report covering the possible adoption of a method and device for measuring warpage. For the measurement of this property, a standard measuring wedge, known as the warpage meter, has been developed at the Mellon Institute. The subcommittee approved the use of this meter but recognized the fact that further data on its construction, manufacture and cost must be obtained.

The importance of the formulation of standards to measure the different physical properties of refractory heat insulating materials, in addition to their characteristic property of retarded heat transfer, was pointed out at a previous meeting of Committee C-8. It was decided to proceed with this work and a suggestion was made that the committee extend its membership to include men particularly qualified in the manufacture, use and knowledge of properties of these refractory materials.

Of the various physical characteristics of refractory insulating materials which are of interest, the following were mentioned:

1. Cold crushing strength
2. Transverse strength
3. Shrinkage
4. Impact resistance
5. Hardness
6. Crushing strength under heat
7. Expansion under heat.

The urgent need of research and standardization work in this refractory heat insulating field is evident since the importance of insulating brick which are at the same time refractory is growing.

Rubber Products Committee Acts on Standards

Several important actions affecting standard specifications were taken at the meeting in New York City on November 5 of Committee D-11 on Rubber Products.

New performance specifications for rubber insulated wire were presented to the committee by the Subcommittee on Insulated Wire and Cable. In the new specifications, no requirements are included as to composition of the rubber compound, the quality of which is evaluated solely on the basis of test results. The committee voted to accept the new specifications and to recommend their adoption by the Society as an appendix to the present Tentative Specifications for Insulated Wire and Cable (D 27 – 31 T).

New specifications for friction tape were presented to the committee by the Subcommittee on Insulating Tapes. In these specifications, the requirements are made more strict and important changes are given in the methods of test which are presented in greater detail. The present weight requirements are removed and minimum yardage per roll is specified. The committee voted to accept these specifications and to recommend that the Society withdraw the present Standard Specifications for Friction Tape for General Use for Electrical Purposes (D 69 – 28), adopting the new specifications as tentative standards. Revisions were also offered in the Tentative Specifications for Rubber Insulating Tape (D 119 – 28 T), which the committee will recommend for adoption by the Society.

An open discussion emphasized the opinion that in the present state of the industry less attention should be given to the preparation of detailed material specifications for rubber products and that the committee should devote its efforts to standardization of test methods and development of performance specifications. The committee recorded this policy by a formal vote.

At this meeting the resignation of Mr. W. B. Wiegand, Binney & Smith Company, who has served the committee as chairman during the past two years, was accepted with regret. Until the biennial election next June, the activities of the committee at its unanimous request will be directed by Vice-Chairman C. R. Boggs, Simplex Wire and Cable Company, as acting chairman.

Sectional Committee on Coal Classification Reports Progress

At a meeting of the Sectional Committee on Classification of Coal at Pittsburgh, during the week of November 18, considerable progress was reported by technical committees.

The Technical Committee on Use Classification presented a progress report on types of coal used in various parts of the country for steam generation, and a report on provisions relating to differences in kind or quality of fuel with respect to smoke abatement ordinances. The Technical Committee on Scientific Classification discussed at some length a progress report on fitting the various coals of the United States into a system of classification based on the calorific value and the fixed carbon of the ash-free coal as mined.

The Third International Conference on Bituminous Coal, held at Pittsburgh during the same week, afforded a splendid opportunity for holding the meeting of the Sectional Committee. Thirty-three members and guests were present at the meeting, among the latter being four members of the Associate Committee on the Classification of Coal of the

National Research Council of Canada, and two members of the British Engineering Standards Association Committee, who have taken a leading part in coal research and the standardization of methods of testing coal.

Members of the Associate Committee on Coal Classification of the National Research Council of Canada reported, informally, that actual surveys of the composition of Canadian coals were being made, together with special studies on the moisture-holding capacity of the coals of different ranks.

The annual meeting of the Sectional Committee will be held next February during the annual meeting of the American Institute of Mining and Metallurgical Engineers in New York, where a Symposium on the Classification of Coal will be held under the auspices of the A.I.M.E. Coal Division.

Technical Assistant to Committee C-1

Having received the approval of the Executive Committee of the Society, Committee C-1 on Cement has recently put into operation its plans to secure, through a paid technical assistant, closer contact with a much larger group than provided by the actual representation on the committee. The committee particularly desires to learn the opinions and practices of all who are studying and preparing cement specifications.

Not only is it hoped that this endeavor will promote uniformity of practice, but it is intended that the technical assistant will transmit to the appropriate subcommittees and members of Committee C-1 such data, suggestions and questions as may be secured by him. Moreover, he is to lend his assistance in work within the committee. Thus activities in the committee will be increased, while closer relations will be maintained with those outside the committee membership.

Mr. John R. Dwyer has been appointed a member of the A.S.T.M. staff, in which capacity he will fill this position of Technical Assistant to Committee C-1. His headquarters will be at the National Bureau of Standards, Washington, D. C. The appointee was a member of Committee C-1 from 1920 until appointment to this new position. He entered the service of the Bureau of Standards in 1917. For some years he was in charge of cement inspection and testing. He was engaged in various cement and concrete laboratory work at the Bureau until 1929, when he was placed in charge of the Cement Reference Laboratory. This is the cooperative endeavor of the Bureau and the A.S.T.M. to promote uniformity in cement testing. This project, sponsored by Committee C-1, will remain under the supervision of the Technical Assistant.

It is the hope of Committee C-1 that their endeavor to maintain close relations with all those who are studying and using cement will be productive of greater technical interest and will benefit all those who are involved in the use and production of this important engineering material.

Proceedings Are Being Mailed

The 1931 *Proceedings* are now being mailed to the members of the Society and every member should receive his copy within two weeks. If not received within that time, the fact should be called to the attention of the Assistant Treasurer. Part I, containing the committee reports, contains 1119 pages; Part II, which has the technical papers included, comprises 1027 pages.

Committee D-13 Meets at Bureau of Standards

Committee D-13 on Textile Materials met on October 15–16 at the Bureau of Standards, Washington. Several important actions were taken at the meeting, which was attended by 67 members and guests.

A new Subcommittee on Silk was authorized and organized under the chairmanship of H. E. Bishop, John Dunlop's Sons, Inc. This committee will make a survey of the methods of testing in use in the silk trade and will study the applicability of present A.S.T.M. methods of testing.

Section II on Rayon Fabrics is to make a study of performance tests such as tensile strength, using wet specimens, slippage of cloth (weave) texture, fraying, and pulling at seams. This subcommittee plans to develop methods of testing rayon fabrics for consumer performance.

An attempt is to be made to organize a subcommittee on wool. This question has been brought up before and it is hoped the wool industry will be interested in this effort and will take an active interest.

The activities of other subcommittees include the following: a thorough revision of definitions and nomenclature; determination of amount of sizing and quantities of copper and manganese in textiles; specifications for tubular braided sleeving; revision of standard yarn tables; and revision of asbestos yarn specifications.

A paper on "Measurement of Thickness" was presented at the meeting by W. E. Emley, U. S. Bureau of Standards, and F. T. Carson discussed "Control of Humidity in Small Enclosed Spaces." At the annual banquet, Captain D. B. Wainwright, Jr., U. S. Navy, spoke on the "Value of Specifications to Industry." This involved, among other important points, a discussion of performance specifications.

Cement Reference Laboratory

An interesting development, which will probably add considerably to the work of the Cement Reference Laboratory, is the recent ruling of the Bureau of Public Roads to the effect that on and after April 1, 1932, that bureau will accept reports of cement tests only from those laboratories which have been inspected by the Cement Reference Laboratory. A copy of the inspection report is to be furnished to the Bureau of Public Roads by the Cement Reference Laboratory. The first inspection reports must show that the laboratory has been inspected since October 1, 1930, after which date inspection reports will be required at intervals not exceeding two years.

The Cement Reference Laboratory at the Bureau of Standards is maintained jointly by the American Society for Testing Materials and the United States Government for the purpose of promoting uniformity and improvements in cement testing. Inspections of cement laboratories are made upon request without charge. Apparatus is tested and methods demonstrated. After an inspection has been made, a report is sent to the laboratory which has been inspected, setting forth such details of apparatus and methods as are of particular interest. These inspection reports are considered confidential by the Cement Reference Laboratory except when their release to certain offices is authorized by the laboratory involved.

Laboratories which desire inspection should send their requests promptly to the Cement Reference Laboratory at the Bureau of Standards.

American Standards Association

What it Is—What it Does

MANY members of the Society have asked for information regarding the American Standards Association, its set-up, the ways in which it functions, and its relation to the A.S.T.M. Our Society is very active in the work of the A. S. A. and the importance of the A. S. A. functions merits a clear understanding of its activities.

Organization of the A.S.A.

Early in the twentieth century there were relatively few national technical societies and associations which were interested in standardization and only a handful who were engaged in developing standards. In a decade, however, this number had grown to such an extent due to the demands of many varied industries for standardization work, that a need became evident for some means of correlating their work in order to prevent duplication of effort and possible conflict in the resulting standards. The matter came to a head in 1918 when the A.S.T.M. and four other national engineering societies organized the American Engineering Standards Committee. Its purpose was to serve as a clearing house through which national standards could be developed. The work of this committee expanded until in 1928 it was reorganized and called the American Standards Association.

The Association now has 45 member bodies comprising national technical societies, industrial associations and departments of the Federal government. In addition to this membership class, there is a group of cooperating bodies and one of sustaining members. The Association is governed by a Board of Directors of fifteen, nominated by the member bodies. Actions in respect to standards are in the hands of a Standards Council, consisting of the representatives of the member bodies. Messrs. J. A. Capp, F. M. Farmer, and A. A. Stevenson represent the A.S.T.M. on this Council.

American Standards Promulgation

As originally conceived, this organization had as its most important objects the following:

1. To provide means by which societies, groups, etc., could cooperate to avoid duplication of standardization work and thus prevent conflicting results.
2. To decide whether standards submitted by other organizations met with a national consensus of opinion.

Today, the chief work of the A. S. A. can still be summarized in these two statements, although its work has many other important phases all of which are of great value in many branches of our national industrial life.

One method for inter-society cooperation in standardization work involves a sectional committee appointed to study a specific project, initiation of which has been requested by some group or organization. The various interested groups appoint their own represenatatives and these appointments are then approved by the A.S.A. Adequate representation of all interests involved is a prime requisite. Sectional committees usually operate under the guidance of one or more of the groups chiefly concerned, designated as sponsors. Thus, the A.S.T.M. is the sole or joint sponsor of a number of sectional committees. After organization the committee proceeds along lines very similar to those followed by A.S.T.M. standing committees. The standards evolved must be approved, first by letter ballot of the sectional committee; second, by the sponsor; third, by the A.S.A. With the approval of all of these, the resultant standard is truly a national one in the complete sense of the word.

Other methods by which American standards are approved include the Proprietary Standards Method; the acceptance of a long existing standard by all groups concerned; and the general acceptance of a proposed standard in a conference substantiated by written acceptance from a large portion of the interests involved. The first method is of great interest to the A.S.T.M. Under this Proprietary Method, many A.S.T.M. standards have been approved by the A.S.A. Any revisions of these are under the auspices of the Society as the sponsor. Proprietary standards may be submitted only by organizations which occupy an outstanding position in the field of each specific standard.

National Standards Represent Consensus of Those Involved

As previously stated, there is a Standards Council composed of representatives of 45 member bodies, including national technical societies and trade associations and departments of the Federal government. This body has the very important duty of giving final approval to all standards which are to be published and listed by the A.S.A. as "American Standards." For approval as "American Standard" 90 per cent of the council must vote favorably on a project.

It is well to make clear here that the A.S.A. does not attempt to make decisions of industrial policy. What it does do is to provide the machinery through which industries themselves arrive at such decisions. The functions of the Board of Directors and the Standards Council are distinctly judicial ones. Ample machinery in the form of sectional committees, conferences, etc., are provided to reconcile divergent views in technical matters. Matters of representation on groups involved in A.S.A. standards work are determined solely on the principle that groups interested have an inherent right to representation on the body dealing with the subject matter of the standard. This involves great responsibility on the representatives of cooperating bodies.

Standards of A.S.T.M. Approved by A. S. A.

At this writing there have been 194 standards approved by the Standards Association. Of this number there are 58 which were sponsored by the American Society for Testing Materials.

At the present time the A.S.T.M. is sole or joint sponsor of seventeen sectional committees functioning under A.S.A. procedure, and is represented on twenty-one other sectional committees functioning under the sponsorship of other groups. From the extent of its participation it will be seen that the A.S.T.M. recognizes the A.S.A. as a vital force in the standardization movement.

Member of I.S.A.

The A.S.A. is a member-body of the International Standards Association, a federation of the national standardizing bodies in the various countries. As such it serves to keep American industry advised of standardization developments in other countries and arranges for participation in international committees. Recently an International Committee on Nomenclature and Methods of Test of Petroleum Products was organized in which the A.S.T.M. is especially interested and of which the American group holds the secretariat. Dr. R. P. Anderson is the American representative as mentioned elsewhere in the Bulletin.

New Members to November 30, 1931

The following 51 members were elected from July 16 to November 30, 1931, making the total membership, exclusive of student members, 4395:

Company Members (7)

Burgess-Parr Co., Jackson Burgess, President, 111 W. Monroe St., Chicago, Ill.
Cabot, Inc., Godfrey L., F. H. Amon, Tech. Director, 940 Old South Bldg., Boston, Mass.
Cast Stone Inst., C. G. Walker, Assistant Secretary, 33 W. Grand Ave., Chicago, Ill.
Eagle Pencil Co., A. W. deCamp, Works Manager, 710 E. 14th St., New York City.
Indian Refining Co., N. H. Moore, Chief Chemist, 1 Havoline St., Lawrenceville, Ill.
Macwhyte Co., W. R. Bloxdorf, Metallurgist, 2908 14th St., Kenosha, Wis.
Wickwire Spencer Steel Co., B. L. McCarthy, Chief Chemist, Station B, Buffalo, N. Y.

Individual and Other Members (41)

Ahumada, J. M., Inspector in Europe, Obras Sanitarias de la Nacion, Buenos Aires, Argentine. For mail: 26 Avenue de Lamballe, Paris, France.
Bergman, E. O., Assistant Professor of Civil Eng., University of Colorado, Boulder, Colo.
Borden, E. G., General Manager, Doherty Research Co., 60 Wall St., New York City.
Bowen, E. E. W., Research Associate for the National Building Units Corp. at U. S. Bureau of Standards, Washington, D. C.
Bureau of Industrial Research, The, Y. T. Chen, Engr., Tung-Shan, Canton, China.
Burke, J. E., General Manager, The Ready Mixed Concrete Co., 27 Barbeau St., Pittsburgh, Pa.
Cooke, M. B., Manager, Research and Development Depts., Alco Products, Inc., 220 East 42d St., New York City.
de Rozieres, Eugene, Factory Manager and Chemist, Amalgamated Paint Co., Jersey City, N. J. For mail: 16 Peltier Ave., Metuchen, N. J.
Dodge, Lee, Chief Chemist, Lone Star Cement Co. Virginia, Inc., National Bank of Commerce, Norfolk, Va.
Evans, L. L., Partner, Evans & McCoy, Bulkley Bldg., Cleveland, Ohio.
Fisher, C. G., President, Fisher Scientific Co., 717 Forbes St., Pittsburgh, Pa.
Gassteff, W. A., Professor, and Director of Lab. for Testing Materials, Institute for Industrial Construction, Leningrad, U. S. S. R. (Russia). For mail: 8th Krassnoarmejskaja, 21, ap. 10, Leningrad 5, U. S. S. R., (Russia).
Guion, W. D., Commissioner of Bldgs., City of Cleveland Dept. of Public Safety, Division of Bldgs., 505 City Hall, Cleveland, Ohio.
Hagy, E. A., Consulting Engr., Box 588, Cincinnati, Ohio.
Haimbaugh, R. C., Refrigerator Engr., Grigsby Grunow Co., 2060 N. Kolmar Ave., Chicago, Ill.
Henderson, J. P., Engr., C. J. Tagliabue Mfg. Co., 724 E. 27th St., Brooklyn, N. Y.
Hill, E. G., Industrial Fellow, Mellon Inst. of Industrial Research, Pittsburgh, Pa. For mail: Lukens Steel Co., Coatesville, Pa.
Hubbard, D. O., Salesman, Eagle-Picher Lead Co., 901 Temple Bar Bldg., Cincinnati, Ohio.
Indian Lac Research Inst., Director, P. O. Namkum, Ranchi, Bihar and Orissa, India.
King, K. Van Ness, Manager, Materials Dept., Standard Oil Co. of California, 225 Bush St., San Francisco, Calif.
Lear, J. S., Instructor in Testing and Strength of Materials, C. B. Connelley Trade School, Pittsburgh, Pa. For mail: 66 Linshaw Ave., Ingram, Pittsburgh (5), Pa.
Levine, H. J., Vice-President and Manager, National Brick Corp., 35-28 Vernon Boulevard, Long Island City, N. Y.
Mack, Pauline Beery, Chemistry Teacher, Chemistry Dept., Pennsylvania State College, State College, Pa.
McCurry, F. W., Chief Chemist, Derby Oil Co., Wichita, Kans. For mail: 552 N. Terrace Drive, Wichita, Kans.
Motta, Arthur, Director, Water and Sewer Dept., Repartição de Auguas e Esgotos, Rua do Riachuelo 25, São Paulo, Brazil.
New Zealand Public Works Dept., F. W. Furkert, Engr.-in-Chief, Wellington, New Zealand.
North, C. O., President, Kavalco Products, Inc., Box 287, Nitro, W. Va.
Passos, E. J., City Engr., In Charge of Lab. for Testing Materials, Club de Engenharia, Avenida Rio Branco 116, Rio de Janeiro, Brazil.
Pennsylvania, Commonwealth of, Dept. of Property and Supplies, Bureau of Eng. and Constr., Chief Engr., State Capitol Bldg., Harrisburg, Pa.
Phillips, A. J., Superintendent of Research, Am. Smelting and Refining Co., Central Research Lab., Maurer, N. J. For mail: 65 Rose St., Metuchen, N. J.
Rice, C. W., Sales Manager, El Dorado Refining Co., El Dorado, Kans.
Ritchie, A. V., Superintendent, Research Lab., The Texas Company, New York City. For mail: P. O. Drawer F, Beacon, N. Y.
Shimadzu, Genkichi, Director, Shimadzu Seisakusho, Ltd., 18 Nishiki-Cho, 1 Chome, Kandaku, Tokio, Japan.
Smith, J. R., c/o Chief Telegraph Engr., General Post Office, Wellington, New Zealand.
Stoddard, J. D., Vice-President and Treasurer, The Detroit Testing Lab., 554 Bagley Ave., Detroit, Mich.
Takahashi, K., The Furukawa Elec. Co., Ltd., Nishi-Hiranumacho, Yokohama, Japan.
Thorn, W. J., Manager, Philadelphia Branch, Innis, Speiden and Co., New York City. For mail: 401 N. Broad St., Philadelphia, Pa.
Truax, T. R., Senior Wood Technologist, U. S. Forest Products Lab., Madison, Wis.
University of Alabama Library, School of Chemistry, Metallurgy and Ceramics, University, Ala.
Wardle, J. D., Chief Engr., Iowa Railway and Light Corp., Cedar Rapids, Iowa.
Williams, E. C., Director of Research, Shell Development Co., 53d and Horton Sts., Emeryville, Calif.

Junior Members (3)

Galbraith, Lawrence, Testing Officer, University of Melbourne, Corlton, N. 3, Victoria, Australia.
Hoover, D. A., Metallurgist, Hoover & Strong, Inc., 119 W. Tupper St., Buffalo, N. Y.
Marin, Joseph, Instructor in Civil Eng., Dept. of Civil Eng., Rutgers Univ., New Brunswick, N. J.

Index to Methods of Testing Is Issued

Committee E-1 on Methods of Testing is again issuing a combined Index to the Methods of Testing of the Society, supplementing the indexes to standards and tentative standards now appearing in the Book of Standards and the Book of Tentative Standards, respectively. This index is intended to be of assistance to the standing committees of the Society in looking up procedures for given determinations that may have been prepared by other standing committees. With such an index available to all methods that may have been issued of a given type, the committee may find one of these methods will serve its purpose, or if not directly applicable may afford some very helpful suggestions.

The revised index will again be issued in mimeographed form and will be furnished to the representatives of the standing committees serving on Committee E-1 and to the officers of committees. It is sent to other members of the Society on request.

Pamphlet Gives List of Standards

Each year sees many important additions to an already large number of A.S.T.M. Standards and Tentative Standards. With the adoption of 17 new standards and 15 revisions of standards, in accordance with the letter ballot announced elsewhere in this issue, the Society now has 443 Standards that have been formally adopted. In addition it has 180 classified as "Tentative Standards." With the total number now aggregating 623 the lists of standards prepared annually should be of considerable assistance to our members, aside from the annual Index, in locating any standard desired and ascertaining whether certain materials are covered by Society standards. The standards are listed under the various materials to which the specifications and methods of test apply. The list appears in the current Year Book and in the Book of A.S.T.M. Tentative Standards. In addition it is made available in separate pamphlet form for the information of those making inquiry concerning the standards of the Society.

Glossary of Terms Now Available

A glossary of the terms which are used in A.S.T.M. standards and tentative standards has again been prepared in mimeographed form. The glossary has been revised and brought up to date as of September 1, 1931, and includes all new or revised definitions of terms which were presented at the last annual meeting of the Society. This glossary is prepared by Committee E-8 on Nomenclature and Definitions primarily for the use of the members of that committee and officers of the other standing committees. However, as with the previous issues of the Glossary of Terms, many of the other Society members will be interested and copies will be furnished on request.

Engineering Societies Monograph Published

Four national engineering societies, A.S.C.E., A.I.M.E., A.S.M.E., A.I.E.E. have made arrangements for the production of selected books adjudged to possess usefulness for engineers or industry, but not likely to be published because of too limited sale without special introduction. The first of these monographs has recently been issued. It is Dr. A. Nadai's book "Plasticity," which treats of the mechanics of the plastic state of matter. This is based on his original German work, but has been amplified and enlarged. There is a dearth of information on plasticity and this English translation and revision makes available an authoritative treatment of the subject.

The book is of especial interest to members of the Society, since Dr. Nadai was the Edgar Marburg Lecturer at the 1931 annual meeting in Chicago where he delivered a treatise on "The Phenomenon of Slip in Plastic Materials."

Addresses Wanted

Anyone knowing the present address of any of the following members, whose last known addresses are given below, are asked to notify the Secretary-Treasurer:

Rapier R. Coghlan, Chemical Engineer, Marquette Cement Mfg. Co., 1702 Marquette Bldg., Chicago, Ill.

John E. Jackson, President, John E. Jackson, Inc., Room 1208, 60 John St., New York City.

Smith, Harry H., Research Engineer, Industrial Silica Corp., 512 McClymonds Bldg., Massillon, Ohio.

Tuttle, John B., Woburn Degreasing Co., 110 East 42d St., New York City.

Necrology

We announce with regret the death of one member and one representative:

J. S. A. JOHNSON, Professor of Applied Mechanics and Experimental Engineering, Virginia Polytechnic Inst., Blacksburg, Va.

C. F. GREENE, Greene Brothers, Wichita Falls, Tex.

SERGE N. PETRENKO, Associate Mechanical Engineer, National Bureau of Standards, Washington, D. C. Member since 1921. Mr. Petrenko was a member of Committee A-3 on Cast Iron and Committee E-1 on Methods of Testing.

RAYMOND B. GILMORE, Ceramic Engineer, North American Refractories Co., Cleveland, Ohio. Member since 1927. Mr. Gilmore was a member of Committee C-8.

Personals

News items concerning the activities of our members will be welcomed for inclusion in this column.

DR. BENNO STRAUSS, Germany, was recently awarded the Howard N. Potts Gold Medal by the Franklin Institute. This medal is awarded for distinguished work in science or the arts or for important development of previous basic discoveries. Dr. Strauss was instrumental in developing a more useful form of corrosion-resistant metal.

W. B. CLARY is now connected with the Worthington Pump and Machinery Corp.

ROY D. LIKINS has severed his connection with the Arkansas State Highway Commission and has opened an office as Materials Inspection Engineer at Little Rock, Ark.

F. R. WADLEIGH is now Consulting Engineer, U. S. Department of the Interior, Anchorage, Alaska.

F. Leo Smith has succeeded LEROY E. KERN as the representative of the American Institute of Architects, Structural Service Dept.

E. B. GORDON has severed his connection with the National Knitted Outerwear Assn. and is now located in Washington, D. C.

DR. ROBERT J. MOORE, Development Manager, Varnish Resin Division, Bakelite Corp., was re-elected secretary, and Henry A. Gardner, Chemical Engineer, The Institute of Paint and Varnish Research, was elected a member of the Executive Committee, of the Paint and Varnish Division of the American Chemical Society.

A. W. LUHRS, formerly of New York City, is now connected with Laboratoire Général pour Emballages, Paris, France.

C. E. BENNETT has left the Georgia Power Co., Atlanta, Ga., to make a connection with the Okonite-Callender Cable Co., Paterson, N. J.

H. H. ROBERTSON, Pittsburgh, has been named as one of the representatives of the metal trade on a new group to be known as the special advisory committee of the National Safety Council. The new committee is to cooperate with the executive committee of the council in broadening the activities of the entire safety movement.

PAUL WEEKS, General Service Manager, Caterpillar Tractor Co., Peoria, Ill., has been transferred to Washington, D. C., to be manager of the Washington branch.

W. T. DONKIN, formerly with the Cleveland Wire Spring Co., is now with the Eaton Axle and Spring Co., Detroit, Mich.

T. D. LYNCH, Past-President of the Society, has resigned his position with the Westinghouse Electric and Mfg. Co. after 32 years of service. For many years he was Manager of the Materials and Process Engineering Dept., and later Consulting Metallurgical Engineer. Mr. Lynch will engage in consulting practice at 122 Washington Ave., Edgewood, Swissvale Station, Pittsburgh.

J. R. KELSEY has accepted a position as Assistant Engineer of Design-Superstructure, San Francisco-Oakland Bay Bridge, San Francisco, Calif.

ARTHUR SCHRODER, formerly Chemical Engineer, Aluminum Research Laboratories, Aluminum Company of America, is now in the Technical Service Dept. of the Precision Scientific Co., Chicago, Ill.

J. B. BERRYMAN, first Vice-President, The Crane Co., Chicago, has been elected president to succeed Richard T. Crane, Jr., who died recently.

H. J. GILKEY, formerly Professor of Civil Engineering, University of Colorado, assumed his new duties as head of the Department of Mechanics at Iowa State College on September 1.

EMERY L. LASIER has tendered his resignation as General Laboratory and Business Manager of the United States Testing Co., Inc., Hoboken, N. J. Mr. Lasier is leaving to resume his private practice of consulting materials and industrial engineering, Palisade, N. J.

NATHAN C. ROCKWOOD, Editor of *Rock Products*, has been elected President of the Tradepress Publishing Corp., which publishes *Rock Products* and *Concrete Products*. He continues his duties as editor, in which capacity he has served for 15 years.

ALBERT H. EMERY, JR., has been awarded one of the three John Scott Medals by the City of Philadelphia for the development of a materials testing machine. These medals are awarded to members of the A.S.M.E. for inventions that will be useful to mankind.

PROFESSIONAL CARDS

PROFESSIONAL CARDS will be accepted for inclusion on this page from Consulting Engineers, Metallurgists, Chemists, Testing Engineers and Testing Laboratories.

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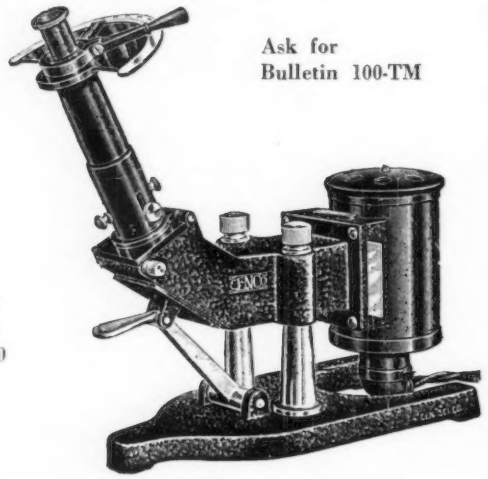

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strength, stretch, and fatigue points of cloth, cordage, fibers, insulating materials, leather, metal, rubber, silk, tire cord, ligatures, wire, paper, etc. Also rubber abrasion and flexing machines.

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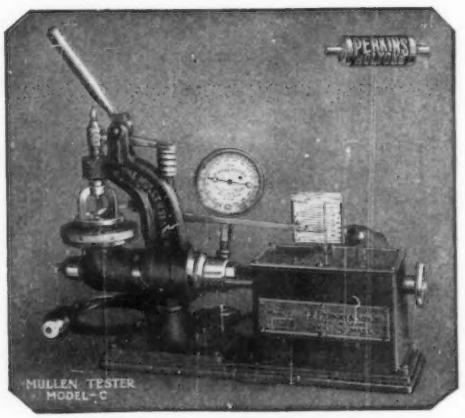

Perkins Mullen Tester

MODEL C

While ascertaining the bursting strength of your specimen, this tester also records on the deflectograph card the elongation or stretch of the material under test.

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Engineers and Manufacturers
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E. & A. Machine Shop

Makes apparatus according to the specifications of the American Society for Testing Materials.

Apparatus includes instruments for testing asphalt, cement, oils, paints, and varnish, as well as other materials.

SPECIAL PRODUCTS ARE:

MacMichael Viscosimeters for insulating varnishes, heavy oils, gelatines, glue, and similar materials.

Young's Gravitometers for specific gravity of rubber samples.

DeGraaf Electric Fusing Point of Coal Ash Apparatus.

G. E. Life Test for Transformer Oils Apparatus.

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On nitrided or case-hardened surfaces, thin sheet materials, wire, small gear or worm teeth, edges of cutting tools, and small objects.

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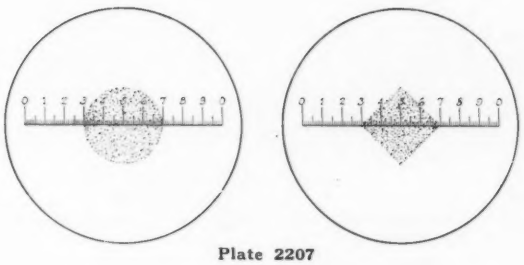


Plate 2207

Type E-2 machine with Micro-Projection head shows on screen round or square indentations against scale directly before eyes of operator.

In illustration machine is set with indenter head swung away and microscope stopped over impression for reading hardness.

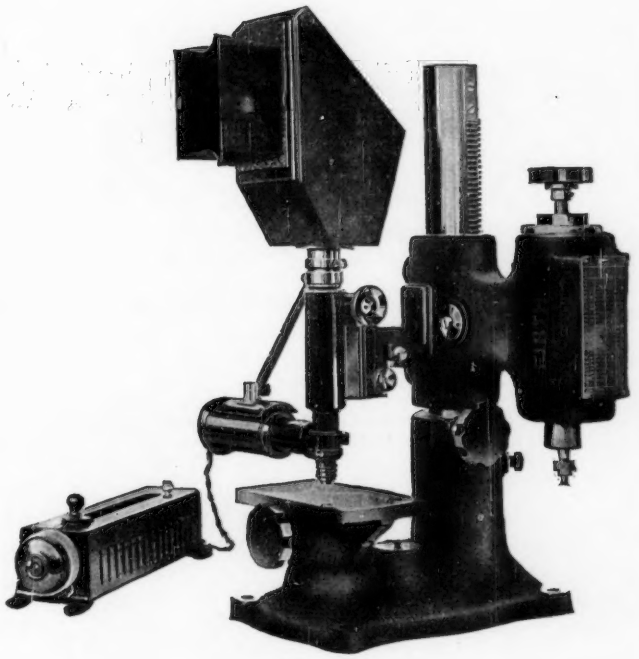


Plate 2201

The Firth Hardometer operates on the standard Brinell System of measuring the diameter or diagonal of small impression (almost invisible), using lighter loads (down to 10 kg.) and either a small steel ball—on thin or soft parts—or diamond pyramid—on hardest materials—as indenters.

It is easy to operate and is completely self-contained, including indenter head and high-power microscope on a convenient bench stand as illustrated.

Folder will be sent on request completely describing the Firth Hardometer and its uses.

Tinius Olsen Testing Machine Company

500 North 12th Street **Philadelphia, Pa., U. S. A.**

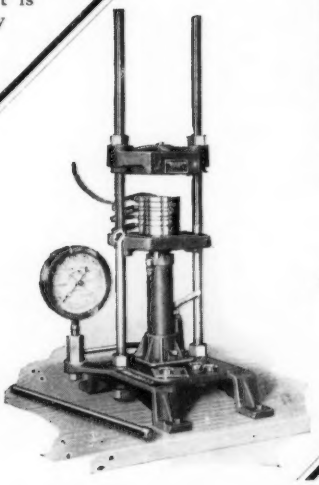
New Developments in TAG Instruments for Testing Petroleum Products

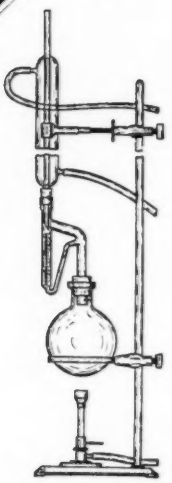
AMONG the newer instruments which have been standardized by the A.S.T.M. recently, and which illustrate the TAG policy of always keeping abreast of the times, are those for determining vapor pressure of gasoline, the amo nt of dilution in crank case oil and the expressible oil and moisture in wax.

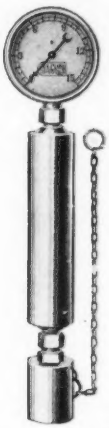
The Reid Vapor Pressure Bomb as shown is a development of older types and an effective method is used for making gas pipe joints. The older type bombs employed pipe thread connections which soon wore out. The TAG apparatus uses machined threads and a tight joint is obtained by the use of composition washers which can easily be replaced when worn.

The Dilution Tester is the latest development and has been adopted as a result of co-operative tests made by the Petroleum Committee.

The Oil and Moisture in Wax Apparatus when used in conjunction with a laboratory press gives accurate results for this important determination.







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The only machine giving proportional readings throughout the metallurgical range with accuracy.

Corrected Brinell figures obtained through all ranges. The load is applied, maintained and released automatically. There is no damage to finished work and no risk of error in readings. It is applicable to large or small pieces and provides a means of rapid checking to specified limits.

In research work into the constitution and properties of nitrided steel cases, after a trial of other hardness testing machines, this machine was selected as the most suitable, as besides the hardness it indicates the friability of the case, which is a measure of its wearing properties.

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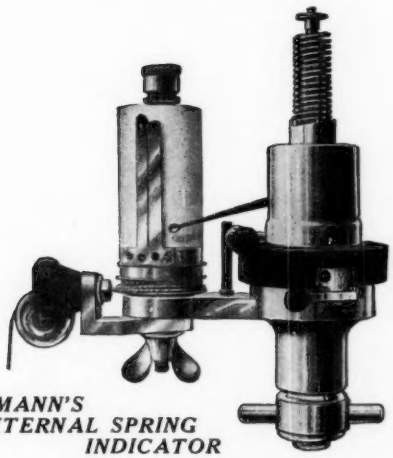

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Remote electric control, makes a series of large diagrams without changing paper.

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For recording oscillations and vibrations of all kinds, from the highest to the lowest frequencies, in any direction.

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The cement test piece is formed on the top of the plate by means of a standard mold—the mold is removed and the handle turned 30 times in 30 seconds. The average final diameter (in millimeters) of the base of the mortar pat is known as the flow.

The apparatus, with level, without mold, $50.00
The Standard Mold, of stainless steel, $8.00

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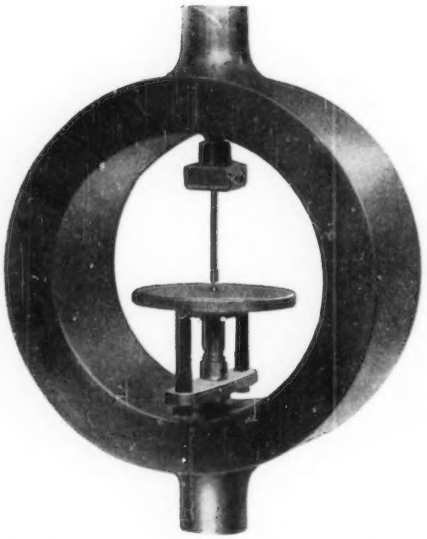

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Certified by the Bureau of Standards. This is authoritative assurance that it is suitable for checking testing machines.

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1931 Was a Year of Great Success for

AMSLER TESTING MACHINES

DURING 1931, the purchases of Amsler testing machines represented a larger percentage of the total number of testing machines installed than in any previous year. This is easily explained by the fact that Amsler machines are preferred by those testing engineers who are *thoroughly* familiar with *all* makes, and that the number of well-informed testing engineers is steadily growing. The more a testing engineer knows of testing machines, in general, the better he likes the Amsler machines.

With hundreds of Amsler testing machines installed in the U.S.A. and Canada, no repairs or replacements of damaged parts were necessary during 1931. Amsler testing machines are the only ones which are truly *"indestructible."* As years go by, this valuable, *exclusive* feature of Amsler machines becomes more apparent to American testing engineers. Thus, time itself is a great booster for Amsler machines.

During this year, the leadership of Dr. Amsler in developing and designing of testing appliances received acknowledgment by many other members of the testing machine industry. Nothing is more flattering to a leader than attempts of imitation by others. By the time a copyist has brought out an imitation model, the leader is again 10 years ahead of the copyist. As the Chief of the Industrial Machinery Division of the Department of Commerce recently said, in a lecture at Columbia University:

"Machinery simply cannot be produced on the basis of so many cents per pound. It is not merely iron and steel and brass. In modern machinery, the designer transfers to these base metals *much of his own skill and intelligence, factors of the greatest importance to the machine user but a goal that is not to be reached via the copyist.* The only excuse for a copyist is a cheaper price, and the policy of the copyist makes it necessary to economize on every operation in production, from the drawing board to the shipping room. Machinery buyers appear to find it necessary to develop a much better policy with regard to this phase of the equipment policy. There is something inconsistent in attempting to secure the best machinery on basis of the low bid."

During 1931, the progressive leadership of Amsler, acknowledged by many copyists, has been fully realized by the American testing engineers, as proved by the increased percentage of purchases of Amsler machines. The skill, intelligence, experience of the Amsler organization, the precision workmanship of the products of the great Amsler plant, have never been duplicated or approached by others. This leadership of Amsler is firmly enrooted, and it is realized and appreciated by the testing experts of the U. S. A. and all other countries of the world.

HERMAN A. HOLZ

TESTING ENGINEER

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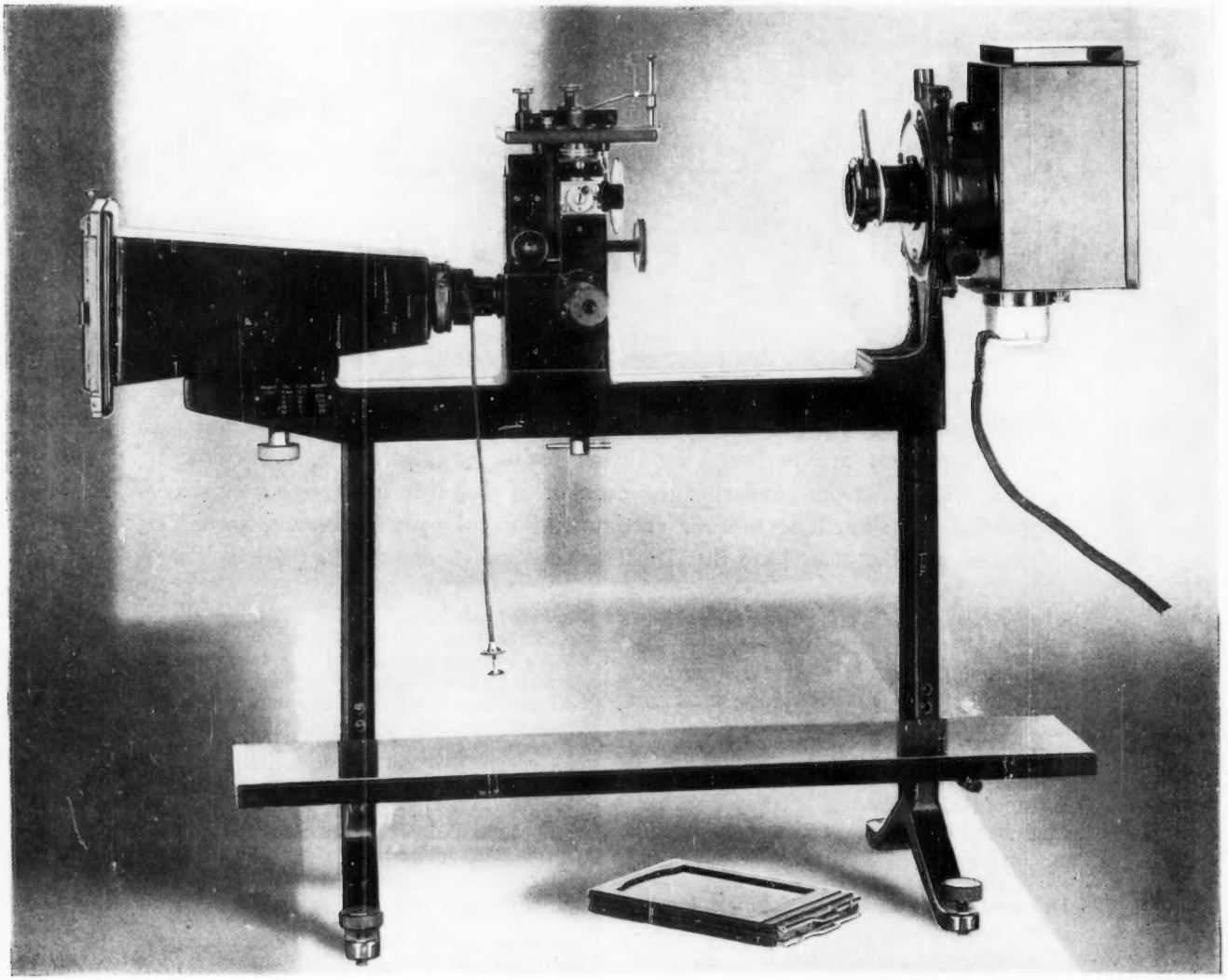

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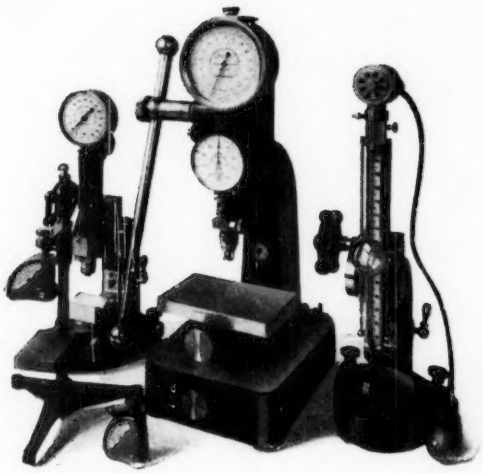

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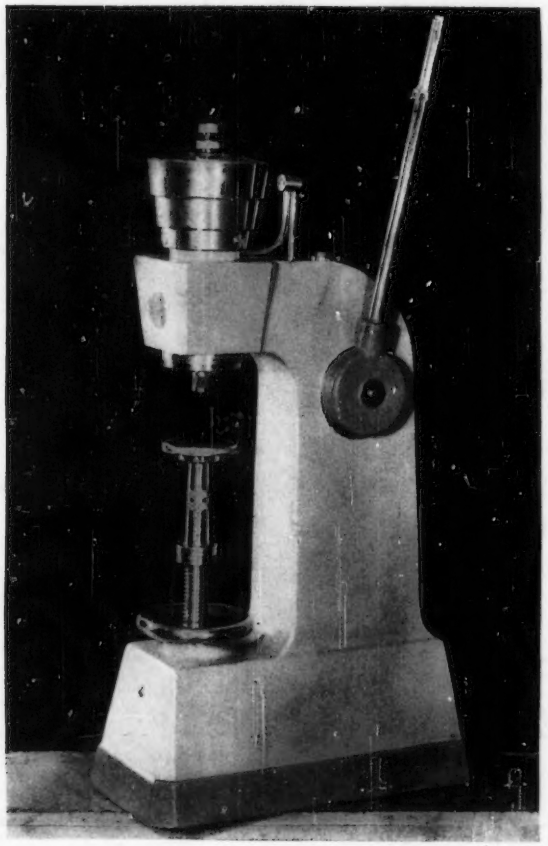

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